Implementing Core Data

Hands-On Examples

Session 126

These are confidential sessions—please refrain from filming or taking pictures.

Application Technologies

Implementing Core Data

Hands-On Examples

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Development Technologies

http://developer.apple.com/wwdc2005/

What You'll Learn

- Core Data modeling
- Command-line tool with a Persistence Stack
- Simple table view interface without bindings
- Building on bindings
- Completed Core Recipes app

Things You'll Need:

Mac OS X 10.4.x (Tiger)

Xcode v2.0 or v2.1

WWDC Sample Code CD or disk image

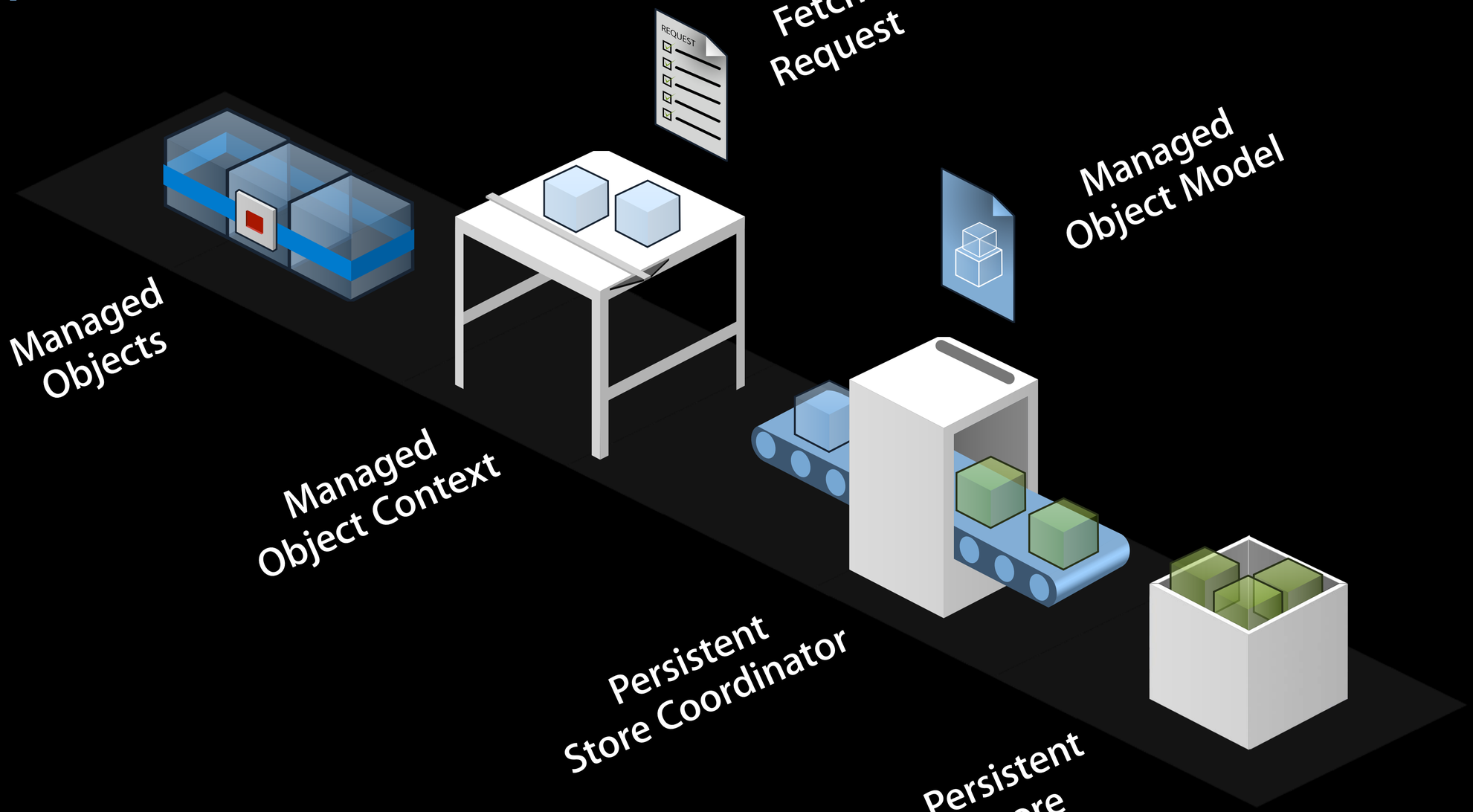
"Core Recipes" Hands-On Examples Folder

Core Data Overview

http://developer.apple.com/wwdc2005/

Core Data: the Architecture

The "persistence stack"



Core Data Modeling

Example 1—Working with a Core Data Model
CoreRecipes-Begin.xcdatamodel

http://developer.apple.com/wwdc2005/

What You'll Learn

- Working with your data model
- Adding entities, attributes, and relationships
- Predicates and the predicate builder

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What We Did

- Added an attribute to an existing entity
- Created a new entity
- Added a one-to-many relationship between two entities
- Created a fetch request and used the predicate builder

Command-Line Core Data

Example 2—Building a Core Data Command Line Tool
CoreRecipesTool-Begin

http://developer.apple.com/wwdc2005/

What You'll Learn

- Creating a Core Data persistence stack
- Fetching and inserting managed objects
- Saving the object graph

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What We Did

- Set up a Core Data persistence stack
- Fetched managed objects from it
- Inserted a new managed object
- Saved an object graph

Core Data and AppKit

Example 3—Using Core Data with a Simple Cocoa View
CoreRecipesCocoaView-Begin

http://developer.apple.com/wwdc2005/

What You'll Learn

- Displaying managed object data in a table view
- Traversing relationships
- Using a managed object subclass
- Deleting managed objects
- Using delete rules

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What We Did

- Populated a table view with data from managed objects
- Demonstrated traversing the relationship from a recipe to a chef
- Created a custom managed object subclass with a fullName accessor
- Demonstrated the nullify and cascade delete rules
- Created a custom data formatter

Core Data and Cocoa Bindings

Example 4—Working with Core Data and Cocoa Bindings
CoreRecipesCocoaBindings-Begin

http://developer.apple.com/wwdc2005/

What You'll Learn

- Connecting your model to a prototype interface
- Undo handling
- Iteratively adding features

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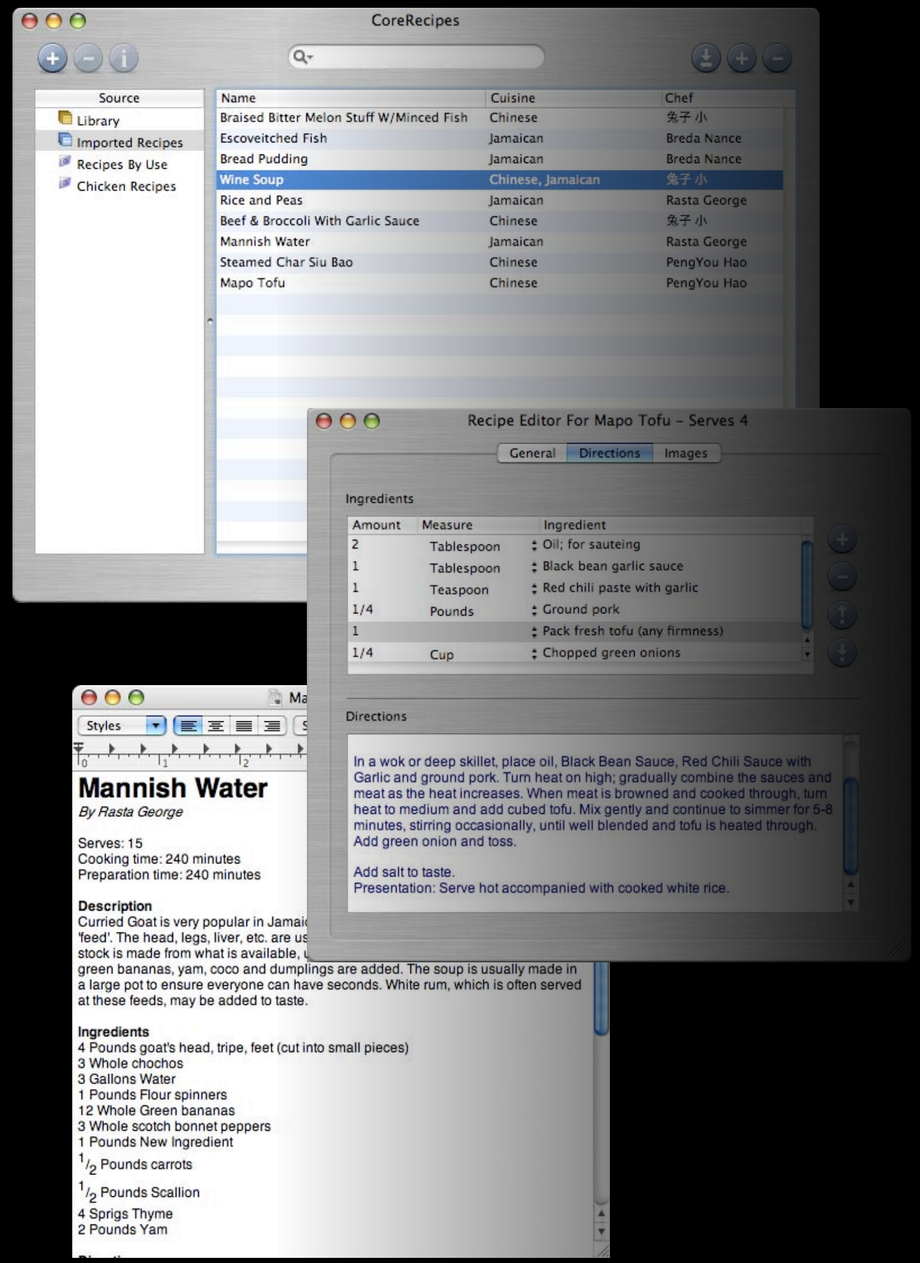
What We Did

- Created a prototype application from a prototype human interface and a prototype data model
- Integrated Core Data undo handling in a single-window application
- Started adding features to the prototype application

Core Recipes: the Finished App

CoreRecipes/Sample Applications/CoreRecipesApp/CoreRecipesApp.xcode

http://developer.apple.com/wwdc2005/



Core Recipes App

Sample Application

- Core Data application used to create and manage recipe information
- Demonstrates:
  - Working with XML and In-Memory stores
  - Using a coordinator with multiple stores
  - Using one context per editor window
  - Creating “smart” groups with predicates
  - Generating URLs for managed objects
  - Integrating Core Data with Spotlight
  - NSObjectControllers and Cocoa bindings

Demo

http://developer.apple.com/wwdc2005/

Advanced Topics

http://developer.apple.com/wwdc2005/

Advanced Topics

- Configurations
  - Named collections of entities
  - Constrain storage to a subset of a model
- Transient properties: all of the management, none of the persistence
  - Derived attributes that need to be modeled
  - Using your own value classes
- Copy and paste, drag and drop
  - Object IDs vs. encoding
  - Relationship issues

Related session
Advanced Core Data Usages

Session 143
Friday 2:00pm

More Information

http://developer.apple.com/wwdc2005/

Documentation, Sample Code, and Other Resources

http://developer.apple.com/wwdc2005/

Related Sessions

Lab: Core Data	Thursday 12:00PM
Getting the Most Out of Cocoa Bindings	Session 136 Thursday 2:00PM
Lab: Core Data	Thursday 3:30PM
Cocoa and Core Data Feedback Forum	Session 139 Friday 9:00AM
Advanced Core Data Usages	Session 143 Friday 2:00PM

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